

**COMMONWEALTH OF KENTUCKY**  
**BEFORE THE KENTUCKY STATE BOARD ON**  
**ELECTRIC GENERATION AND TRANSMISSION SITING**

In the Matter of:

THE APPLICATION OF THOROUGHbred	)	
GENERATING COMPANY, LLC FOR A MERCHANT	)	CASE NO.
POWER PLANT CONSTRUCTION CERTIFICATE	)	2002-00150
IN MUHLENBERG, COUNTY, KY	)	

**TESTIMONY**  
**OF**  
**JACOB WILLIAMS, VICE PRESIDENT OF**  
**PEABODY HOLDING COMPANY, INC.**

**October 6, 2003**

1 **Q. Please state your name, position and business address.**

2 A. My name is Jacob Williams. I am Vice President of Generation Development for  
3 Peabody Holding Company, Inc. My address is 701 Market Street, St. Louis, Missouri  
4 63101. My telephone number is (314) 342-7569.

5 **Q. By whom are you employed, in what capacity and what are your responsibilities?**

6 A. I am employed by Peabody Holding Company, Inc. and serve in the above  
7 position. I am leading Peabody's effort to develop three greenfield mine-mouth coal  
8 generation projects in the Midwest and Southwest. In that capacity, I am Chair of the  
9 Western Business Roundtable Electricity Committee.

10 **Q. Could you give a brief review of your work experience and educational  
11 background?**

12 A. I have held the following employment positions:

13 Vice President of Commercial Services for Peabody Coal Sales Company from April,  
14 1999 to December, 2000.

15  
16 Assistant Vice President of Business Development for the Cargill – Alliant Power Joint  
17 Venture from October, 1997 until April, 1999.

18  
19 Management positions in Bulk Power Marketing & Trading and Generation Planning for  
20 Wisconsin Power & Light (now Alliant Energy) from 1993 until October 1997.

21  
22 Various positions in Resource Planning, Wholesale and Industrial Sales for Wisconsin  
23 Power & Light from 1986 until 1993.

24  
25 I have the following educational background:

26 B.S. in Electrical Engineering from University of Illinois in 1985.

27 MBA from the University of Wisconsin-Madison in 1992.

28 **Q. What is the purpose of your testimony?**

29 A. The purpose of my testimony is to demonstrate the following: (i) the reasons

1 Thoroughbred's proposed electric generating facility is not located on the D.B. Wilson  
2 site owned by Big Rivers Electric Corporation ("BREC"); (ii) the numerous meetings  
3 Peabody and Thoroughbred have had with representatives of BREC and others in the  
4 industry; and (iii) the positive impact Thoroughbred's proposed facility will have on  
5 Kentucky's Transmission Grid.

6 **Q. Will the proposed Electric Generating Facility be located upon a site that has**  
7 **existing generating facilities capable of generating ten megawatts (10MW) or more**  
8 **of electricity?**

9 A. Thoroughbred's proposed Electric Generating Facility will not be located upon a  
10 site that has existing generating facilities capable of generating ten megawatts ("10MW")  
11 or more of electricity. There has been some suggestion that Thoroughbred should locate  
12 its proposed Electric Generating Facility at BREC's D.B. Wilson site. The reasons  
13 BREC's D.B. Wilson site would not be a suitable location for Thoroughbred's proposed  
14 Electric Generating Facility may be summarized as follows:

15 1. BREC did not at the time, and may not now, have the financial viability to  
16 serve as a partner on the proposed project with Thoroughbred.

17 2. BREC has not developed any new plant in the last 20 years and would not  
18 be an appropriate partner on the project proposed by Thoroughbred.

19 3. BREC has discussed a plant expansion for many years without taking any  
20 affirmative steps to do so based, in part we believe, on its precarious financial position  
21 and a lack of need for the power to meet its own customers needs. As reviewed in  
22 Section 9 of Thoroughbred's Application and in the response to BREC Data Request No.

1 19 (filed September 8, 2003), the permitting process for Thoroughbred's proposed  
2 Facility began in 2000, two years before the siting legislation was enacted. As the Board  
3 can see from a review of Section 10 of its Application, Thoroughbred has aggressively  
4 pursued the permits needed for its project to proceed. (Permitting matters are separately  
5 addressed in the prefiled testimony of Dianna Tickner.)

6 4. Any proposed expansion of BREC's D.B. Wilson plant has been suggested  
7 to be about one-third of the capacity of Thoroughbred's proposed Facility and would be  
8 insufficient to meet Thoroughbred's needs.

9 5. The agreement reached to remove BREC from bankruptcy created a 25-  
10 year operating lease with Western Kentucky Energy ("WKE") for all BREC facilities  
11 including any expansions thereof, as well as a power sales agreement with BREC. This  
12 served in Thoroughbred's view as an additional impediment to the proposed project being  
13 located at BREC's D.B. Wilson site. It is Thoroughbred's understanding that the  
14 operating lease creates an exclusive right for WKE to operate any plant expansion and  
15 would require WKE's approval of and participation in such an expansion. This  
16 arrangement raised the specter of a significant potential for future operational conflicts  
17 and was yet one more complication for such a project to move forward within a  
18 reasonable timeframe. Additionally, it was Thoroughbred's understanding that LG&E's  
19 approval would be needed and that such approval would likely be conditioned on a  
20 revaluation of the terms of the existing power sales agreement with Big Rivers in order to  
21 make the terms more financially beneficial to LG&E. Thoroughbred was concerned that  
22 the need for these separate negotiations among other parties would make the project

1 development process even more complex and prone to delay.

2 6. The past problems at BREC, and previous issues between BREC and  
3 Thoroughbred's parent entity, make BREC an inappropriate partner for the present  
4 project.

5 The above summary demonstrates why BREC's D.B. Wilson Facility would not  
6 be a viable alternative to Thoroughbred's proposed Electric Generating Facility.

7 **Q. Could you describe the discussions by Peabody and Thoroughbred with BREC and**  
8 **others in the industry regarding the expansion of electric generation capacity in**  
9 **Kentucky.**

10 A. Peabody and Thoroughbred have been involved in numerous discussions with  
11 BREC and others in the industry regarding the possibility of expansion of electric  
12 generating capacity. These discussions may be summarized as follows:

13 1. As early August 23, 2000, representatives of Thoroughbred toured the  
14 entire Thoroughbred site, and the area surrounding TVA's Paradise, LG&E's Green River  
15 and BREC's D.B. Wilson power plant sites, to review the feasibility of alternate sites and  
16 transmission interconnection issues.

17 2. On or about February 23, 2001, a Confidentiality Agreement was executed  
18 between Thoroughbred's parent and BREC to share information on the Thoroughbred  
19 Energy Campus as well as other generation opportunities in the area.

20 3. On February 27, 2001, representatives of Thoroughbred met with  
21 representatives of BREC to discuss the Thoroughbred Energy Campus. These  
22 discussions included the potential addition of units at BREC's D.B. Wilson facility but,

1 for the reasons set forth on pages 2 through 3, *supra*, it was apparent that the D.B. Wilson  
2 facility was not a viable option for Thoroughbred, which is one of the reasons these  
3 discussions were not included in Section 9 of Thoroughbred's Application.

4 4. Although Thoroughbred determined that it would proceed with its proposed  
5 project, Thoroughbred participated in approximately ten additional meetings, six of which  
6 specifically involved Thoroughbred or its affiliates' interest in participating in an  
7 expansion of BREC's D.B. Wilson facility.

8 5. As of August 28, 2002, Thoroughbred made clear that it intended to  
9 proceed with its proposed project regardless of the outcome of the continuing discussions  
10 regarding possible expansion of BREC's D.B. Wilson facility.

11 **Q. How will the load from the addition of Thoroughbred's proposed Electric**  
12 **Generating Facility affect the transmission grid?**

13 A. Thoroughbred's proposed Electric Generating Facility will provide significant  
14 improvements to Kentucky's Transmission Grid, at Thoroughbred's expense, and ensure  
15 the continued reliability of service for Kentucky retail customers. Thoroughbred's  
16 proposed Electric Generating Facility will be comprised of two 750 MW (nominal)  
17 generators in a split bus arrangement. One generator will tie to the BREC Transmission  
18 System through a 345 kV connection. The other generating unit will be tied to the  
19 Tennessee Valley Authority ("TVA") Transmission Grid by way of a 500 kV connection.  
20 Initially, the two generator connections will be operated electrically independent from  
21 each other since no Thoroughbred Electric Generating Facility switchyard tie between  
22 the 345 kV and 500 kV buses is planned.

1           Transmission line construction will be necessary to connect the proposed Facility  
2 to the Electric Transmission Grid in Kentucky. Thoroughbred proposes to make this  
3 electrical interconnection within an approximate 20-mile corridor, which extends to the  
4 North and South of the proposed Facility. (Thoroughbred intends to submit a separate  
5 construction certificate application for transmission facilities as noted in Section 5.2 of its  
6 pending Application.) This corridor resides in Ohio and Muhlenberg Counties of  
7 Kentucky. This corridor will have the terminal points of BREC's D.B. Wilson Power  
8 Plant switchyard to the North (Ohio county) nearest Matanzas, Kentucky, while the  
9 Southern terminal point will be at a location near the Paradise Power Plant (Muhlenberg  
10 County), near Drakesboro, Kentucky, which is owned by the TVA. The proposed Facility  
11 will sit near the mid-point of this corridor.

12           The majority of the facilities that providers have identified as required for  
13 interconnection, would be common to any base-load generation addition in the immediate  
14 area of Thoroughbred's proposed Facility. Any project seeking interconnection to BREC  
15 or the TVA in the vicinity would likely encounter the need to construct the similar  
16 facilities and therefore, the proposed Facility is a good use of common infrastructure.  
17 The Facility interconnection plan will likely provide additional generation outlet  
18 capability beyond Thoroughbred's needs. It is also important to note that FERC requires  
19 Thoroughbred to fund any required transmission upgrade upfront. Current FERC policy  
20 would provide for Thoroughbred to receive transmission service credits from the  
21 transmission providers for the amount of the facilities deemed as network upgrades.  
22 These credits would be used to offset transmission service purchased by Thoroughbred in

1 the future. The upgrades paid for by Thoroughbred will improve the overall reliability of  
2 BREC's Transmission System.

3 Thoroughbred submitted applications for interconnection service to both BREC  
4 and TVA in March of 2001. Since that time, Thoroughbred has been actively engaged  
5 with both parties to bring about an interconnection plan that meets the needs of the  
6 Facility and creates an enhancement to the existing Transmission System. Since  
7 submitting the BREC application, BREC's interconnection process has led to completion  
8 of a Feasibility Study in June of 2001 and facilitated a multiple party Interconnection  
9 System Impact Study, which was completed in February 2003. Commonwealth &  
10 Associates, Inc. performed the study, while participants included BREC, Louisville Gas  
11 and Electric/Kentucky Utilities ("LG&E"), Owensboro Municipal Utilities ("OMU"), the  
12 TVA and the Midwest Independent System Operators ("MISO"). As noted previously,  
13 the July 31, 2003 BREC Facility Study was provided to the Board on August 27, 2003.

14 The TVA interconnection process initially moved slowly because of the backlog  
15 of interconnection requests from independent power producers. The TVA completed the  
16 Interconnection System Impact Study in July of 2002. The TVA is currently conducting a  
17 Facility Study, which is projected to be completed in December of 2004. Following the  
18 substantial completion of the Facility Study by each respective provider, Thoroughbred  
19 will negotiate and ultimately execute an Interconnection Agreement with both BREC and  
20 the TVA for the respective Thoroughbred interconnections.

21 In summary, a total of five interconnection studies have been performed for the  
22 proposed Facility. Thoroughbred has contracted for two independent interconnection



1 studies to be performed and three other studies have been completed in conjunction with  
2 the transmission provider's interconnection process, as noted above. The complete  
3 studies were provided at Section 5.4 of Thoroughbred's Application and will be reviewed  
4 below.

5 Black & Veatch was commissioned by Peabody to perform a System Impact  
6 Study investigating the effects of interconnecting new generation at the proposed Facility.  
7 Numerous interconnection configurations were evaluated. Among those investigated is  
8 the current interconnection plan. The study utilized traditional single contingency load  
9 flow analysis to compare and contrast interconnection configurations based on  
10 performance and cost. The study was completed in March of 2001, and Peabody used  
11 this study to help formulate the basis for the proposed interconnection configuration in  
12 the application for service to the transmission providers.

13 After making application for Interconnection Service to the BREC System, BREC  
14 performed an initial review of several interconnection options to determine if the  
15 interconnection of generation at this point on the system was feasible. BREC used  
16 normal and first contingency analysis to predict overloads on the system and compare  
17 various interconnection plans involving 750 and 1500 MW connections. The  
18 Interconnection Feasibility Study was completed in June of 2001 and concluded that a  
19 couple of the interconnection options had merit and should be studied in more depth in a  
20 regional study with input from other utilities in the surrounding area.

21 In August of 2001, BREC contracted with Commonwealth & Associates Inc. to  
22 perform a full-blown Regional Interconnection System Impact Study with input and

1 review from BREC, LG&E, OMU and TVA. The MISO became involved in an advisory  
2 role in the summer of 2002. The MISO expanded the list of generators included in the  
3 stability portion of the interconnection study, which was its largest concern. The study  
4 effort was comprehensive and spanned nearly a two-year period of time with its  
5 completion in February of 2003. The scope of the study included traditional load flow,  
6 short circuit and stability analysis. Several interconnection options were evaluated. This  
7 study formed the basis for determining the facilities required for interconnection to  
8 BREC's system.

9 Because of the TVA's generator interconnection queue, the TVA indicated that it  
10 would not begin work on the Thoroughbred interconnection System Impact Study for at  
11 least a year from the time of Thoroughbred's Application to the TVA. As a result,  
12 Thoroughbred contracted with Navigant Consulting, Inc. to perform an interconnection  
13 study for the proposed tie to the TVA System. The study scope included normal and  
14 contingency load flow analysis to determine the suitability of the proposed  
15 interconnection configuration and development of preliminary cost estimates for the  
16 facilities that would have to be constructed or upgraded to mitigate the impacts of  
17 Thoroughbred's interconnection. The Navigant Consulting Study of Thoroughbred's  
18 connection to the TVA Transmission System was completed in March of 2002.

19 As noted above, TVA did not begin its study until the Spring of 2002 due to other  
20 interconnection requests received ahead of Thoroughbred's in the interconnection queue.  
21 Once initiated, TVA rapidly performed a rigorous review of Thoroughbred's proposed  
22 interconnection and completed its study in July of 2002. TVA's review included load

1 flow, short circuit and stability analysis. While the study was comprehensive, the “study  
2 results” (included in Section 5.4.5 of Thoroughbred’s Application) are very brief. The  
3 contents of the results are limited to a list of direct assign and network upgrade facilities,  
4 along with planning accuracy cost estimates for each facility. Section 5.4.5 constitutes all  
5 information received from TVA regarding Thoroughbred’s interconnection request.

6 The MISO Board of Directors recently approved the MISO Transmission  
7 Expansion Plan 2003, which is a comprehensive regional transmission planning effort for  
8 the Midwest. The effort includes consideration of transmission facilities that would run  
9 from across the Ohio River in Indiana to Paradise and by the Thoroughbred site, and then  
10 on to the Wilson substation, which is northeast of Nashville. MISO identified the  
11 Rockport (IN) to Paradise (KY) to Wilson (TN) 500 kV project as having great consumer  
12 benefits. The Thoroughbred to Paradise to Wilson portion of the interconnection and  
13 network upgrades facilities, associated with the Thoroughbred project, makes up almost  
14 two-thirds of the total route for the project identified by MISO.

15 The interconnection and associated upgrades are necessary to be completed in  
16 order for the Kentuckians in Muhlenberg County and the region to receive the economic  
17 benefits of the project, as well as the addition of jobs from the construction and operation  
18 of the proposed Facility.

19 **Q. Does this conclude your testimony?**

20 **A.** Yes it does

21

22

**VERIFICATION**

STATE OF Missouri )  
 )  
COUNTY OF St. Louis )        SS:

The undersigned, Jacob Williams, being duly sworn, deposes and says that he is Vice President of Generation Development of Peabody Holding Company, Inc., that he has personal knowledge of the matters set forth in the foregoing testimony and exhibits, and the answers contained therein are true and correct to the best of ~~her~~<sup>his</sup> information, knowledge and belief.

*Jacob A. Williams*  
JACOB WILLIAMS

Subscribed and sworn to before me, a Notary Public in and before said County and State this 3<sup>rd</sup> day of October, 2003.

My commission expires: 1-21-2006.

*Arthur M. Kiser*  
Notary Public

## CERTIFICATE OF SERVICE

It is hereby certified that a copy of the foregoing was sent by United States First Class Mail, sufficient postage prepaid, to the following this the 10th day of October, 2003.

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